Q. Argaman (*)

RICERCHE ZOOLOGICHE DELLA NAVE OCEANOGRAFICA «MINERVA» (C.N.R.) SULLE ISOLE CIRCUMSARDE. XVI.

A TAXONOMIC STUDY OF SCLEROGIBBIDAE ESPECIALLY FROM THE CIRCUMSARDINIAN ISLANDS

(HYMENOPTERA, ACULEATA)

Introduction. The present study resulted from the kind request of some colleagues to decide upon the identity and systematic position of some species at their hands. A remarkable new genus and species, discovered during the zoological expeditions of the C.N.R. oceanographic ship «MINERVA» is described. All species known to occur in the circumsardinian islands are commented, illustrated or differentiated in a key. For sake of completeness, a new species from Togo also described in the appendix, with comments upon two already known species. Morphological characters useful in identification are discussed to improve the basis of classification within the family referring to material not only from circumsardinian islands. Association of a hitherto unknown female is especially important for completion of our knowledge concerning family Sclerogibbidae in the Mediterranean Basin.

Taxonomically reliable characters that have never been brought together in a revisionary work may be summarized as follows.

All the males herewith studied may easily be divided into two rather distinct entities: i) those with lateral ocelli situated distinctly beyond the line connecting upper top of eyes (Fig. 19); and: ii) those, where that line touching ocelli above (Figs. 17, 21, 24-25) or below. The first group is represented by the holotype male of *Cryptobethylus mancinii* Masi, including the specimens identified by me to be the same species from France, Iberian Peninsula, Balearic Islands, Sardinia,

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Italian mainland and Mideast. Excluded is a male from Herzliyya, Israel, erroneously associated to it in my earlier note (ARGAMAN, 1988). Unique from these specimens is the holotype male of *mancinii*, having OOL (= ocello-ocular line; viz. the minimum distance between a lateral ocellus and nearest compound eye margin) exactly equal to POL (= postocellar line; viz. the minimum distance between lateral ocelli). In this group, the occiput well developed beyond eyes, surface of propodeal disc dull, strongly costulate and rugulose, and the veins and pubescence of fore wing dark brown to blackish.

Specimens identified by me as *mancinii*, other than the holotype, differ from it slightly through their delicately reticulate propodeal dorsum instead strongly costulate and rugulose. They, however, possess all other distinctive features of this species.

The second group of males have the lateral ocelli disposed more or less under the imaginary line connecting the upper tops of eyes. Having the occiput expressively rounded just beyond the eyes (Figs. 17, 21, 24-25), never prolonged posteriad as in *Cryptobethylus* (Fig. 19). I have recently realized (a fact difficult to observe without direct comparison of the material) that there are two kinds of representatives involved. One group is nocturnal or crepuscular, with excessively large ocelli (Fig. 21), and the other group is diurnal, with normal ocelli (Fig. 17, 24, 25).

Males with large ocelli have OOL as long as, or slightly (1.1 times) longer than the major diameter of an ocellus (Fig. 21), median tooth of mandible conspicuously longer than the inner tooth (Fig. 22). Most of them were collected at night, trapped by black-light. They invariably belong to one species, *Lithobiocerus vagabundus* Bridwell.

The other group with small ocelli markedly heterogeneous. Their OOL is sometimes twice (Figs. 24, 25) but often only 1.2 times as long as the major diameter of an ocellus (Fig. 17). Most of them were collected by sweeping the low vegetation, by rearing from host, or were caught in Malaise-trap. The males with short ocello-ocular line decidedly are *Sclerogibba crassifemorata* RIGGIO & DE STEFANI-PEREZ, although the membrane of fore wing of this species may often be fuscous, intensively yellowish or vitreous. They constantly possess a median tooth of mandible distinctly much shorter than both the inner and outer teeth (Fig. 14).

The earlier tentative key presented by me (ARGAMAN, 1988) does not allow accurate identification of the another kind of species with

small ocelli but with the shape of ocellar triangle differing from that of *Sclerogibba*, viz. with ocello-ocular line longer, comparable with two ocellar diameters. At the same time, their mandible have the median tooth longer than the inner tooth, exactly as this occurs in *Lithobiocerus*. As a result of the study of the type material of *Sclerogibba transitoria* Dessart, on the request of Dr. P. Dessart, it has showed to be distinct from *Lithobiocerus*. Herewith being resurrected from an erroneous earlier synonym of mine (ARGAMAN, 1988), and transferred in the genus *Prosclerogibba*. It seems now inevitable for me to reconsider the genus *Prosclerogibba* Kieffer, 1905 (type-species: *Prosclerogibba magrettii* Kieffer, 1913, female); placed in synonymy with *Sclerogibba* by Richards (1939). This because the males of *Lithobiocerus* and *Sclerogibba* have front angle of ocellar triangle right angle, and ocello-ocular line short, while this angle in *transitoria* (only the holotype from Somalia) is acute and the ocello-ocular line long, e.g. the ocellar triangle narrow respective to the shape of fronto-vertex (Fig. 24). This is the basic character with which *Prosclerogibba* has been separated from *Sclerogibba* by Kieffer in the case of the females.

Two different kinds of males are now recognized in the genus *Prosclerogibba*: One, *transitoria*, with ocellar triangle acute. (It may proved to be the unknown male of *magrettii* Kieffer, described from Ethiopia. The type, deposited in the Museo Civico di Storia Naturale Genova, now in loan, was not examined). Other species, consist from those specimens from Togo, considered by DESSART (1985) to be also his *transitoria*. Possessing front angle of ocellar triangle obtuse and differing remarkably both from type of *transitoria* and from representatives of the other genera. They are described here as *Prosclerogibba dessarti*, new species. With this placement, the genus *Prosclerogibba* became somewhat heterogenous.

Discovery of the hitherto unknow female of *Cryptobethylus*, described below, represents a great step to a better knowledge of the Palaearctic fauna of Sclerogibbidae. Similarly, it is almost incredible that an endowed collector, Dr. Roberto Poggi, has found a new genus in the same relatively small and restricted geographic area of the World where other two genera, *Sclerogibba* and *Cryptobethylus*, and initially the whole family Sclerogibbidae were discovered: Italy and its islands. His merits are recognized here as *Poggiana pilosella*, new genus and species. I consider this new genus as an outstanding result of the zoological expeditions of the C.N.R. oceanographic ship «MINERVA»

in the circumsardinian islands. The economic importance of sclerogibbids, as parasitic wasps, increase parallel to the damages caused to the agriculture by their host webspinners (ARGAMAN & MENDEL, 1990, 1991).

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Revised key to selected genera of Sclerogibbidae

1) Postocellar line (the minimum distance measured between lateral ocelli), equal to ocello-ocular line (viz. the minimum distance between inner border of compound eye and nearest margin of lateral ocellus) (Figs. 1, 11, 19) 2

– Postocellar line of female 1.5-3.0 times as long as ocello-ocular line, 1.2-2.0 times longer in male (Figs. 17, 21, 24, 25). Mandibles tridentate (Figs. 13, 14, 22). Occiput of female at most as long as two ocellar diameters. Occiput of male suddenly recede and strongly converge just behind the eye, forming a common arch with the vertex crest (Figs. 17, 21, 24, 25) 3

2) Mandibles, of female – male unknown – bidentate (Fig. 3); occiput (measured at the minimum distance between eye tops and vertex crest) as long as seven ocellar diameters (Fig. 1, 2)..... *Poggiana* gen. nov.

– Mandibles tridentate in both sexes (Fig. 12). Occiput of female as long as three ocellar diameters (Fig. 11). Occiput of male prolonged to a considerable distance behind eyes (Fig. 19), slightly and loosely converge, vertex transversely truncate behind ..... *Cryptobethylus* Marshall

3) Postocellar line of female 1.5-2.0 times as long as ocello-ocular line; occiput as long as two ocellar diameters. Mandibles of male with median tooth distinctly shorter than the inner tooth.

Ocello-ocular line 1.0-1.5 times as long as the major diameter of lateral ocellus ..... *Sclerogibba* Riggio & De Stefani-Perez

– Postocellar line of female 3.0 times as long as ocello-ocular line; occiput a little less than an ocellar diameter. Mandible of male with median tooth distinctly longer than the inner tooth 4

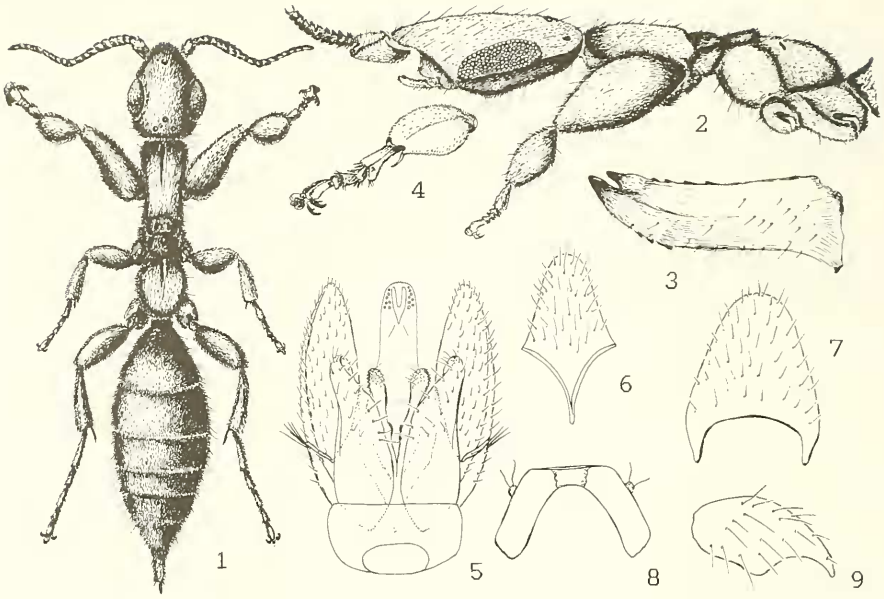
4) Ocello-ocular line of male equal to, or only a slightly longer than, the major diameter of lateral ocellus .... *Lithobiocerus* Bridwell

– Ocello-ocular line of male twice or almost twice as long as major diameter of lateral ocellus ..... *Prosclerogibba* Kieffer

Genus **Poggiana** gen. nov.

Type species: *Poggiana pilosella* sp. nov., by monotypy and present designation.

Diagnosis. Female (male unknown) size small for the family. Apterous, without tegula. Head, of the general shape as in the genus *Sclerogibba*, but the eye rather small; occiput as long as width of eye. Mandible bidentate apically. Both antennae 21-segmented. Median ocellus situated beyond the line connecting upper top of eyes; front angle of ocellar triangle right angle; lateral ocelli situated on the occipital margin and separated from the vertex crest by a distance a little less than their own diameter. Pronotum elongated; with an exceedingly shallow, almost indistinct longitudinal impression mesally, not in form of a sulcus; lateral pronotal lobe perfectly vertical in outline, forming with the dorsal disc a right angle, with only slightly rounded, smooth contour; posterior pronotal margin arcuately emarginate. Mesoscutum shorter than scutellum, with shallow trace of notaulices. Scutellum pyriform, unbordered on the sides; metanotum broadly incomplete medially, but well retained laterally in form of a pair, scale-like pieces. Propodeum long and relatively narrow, with a shallow median impression detectable on the anterior half of the disc. Legs of the general shape ad usual in the subfamily Sclerogibbinae; mid tibia not spinose on the outer face; mid and hind tarsal claws bidentate, with inner tooth much shorter than and far removed from the outer tooth.



Figs. 1-9. 1-4: *Poggiana pilosella* gen. & sp. nov., holotype female; 1 = habitus, 2 = head and thorax lateral aspect, 3 = mandible, 4 = fore tibia and tarsi inner aspect. 5-9: *Lithobiocerus vagabundus* Bridw., male; 5 = genitalia ventral aspect, 6 = last sternum, 7 = penultimate sternum, 8 = cerci, 9 = fore tarsal claw.

Abdomen with six visible terga; first and second with a lateroterga separated by a longitudinal sulcus.

Etymology. Genus dedicated to the talented collector of this minute, rare and unique specimen, Dr. Roberto Poggi, from the Museo Civico di Storia Naturale "Giacomo Doria", Genova, Italia, excellent specialist of Coleoptera. Gender: feminine.

Remarks. The relatively short eye of *Poggiana* is unusual within the family and so far only known to occur in the genus *Caenosclerogibba* Yasumatsu, 1958 (subfamily Caenosclerogibbinae). Whereas the female *Caenosclerogibba*, still to possesses a primitively entire metanotum, surrounding apex of scutellum posteriorly, in *Poggiana* the metanotum is of derived state. Due to better adaptation to terricolous habit, a secondary reduction take place, showing the metanotum broadly interrupted and vanished medially. Therefore *Poggiana* clearly belongs into the subfamily Sclerogibbinae. In this subfamily, however, all

females possess conspicuously large eyes. As in *Poggiana* the eye are so small, the ocello-ocular distance being very large and these two characters distinguish it immediately from all other already known representatives. Indisputably, the male of *Sclerogibba transitoria* Dessart, is also acquainted with small size, short eyes, long ocello-ocular line, characters exactly as they occur in *Poggiana pilosella* described below. In contrast, *transitoria* being distinguished with a clearly tridentate mandible, having the median tooth as long as, or markedly longer than, the inner tooth. This exactly as it occur in the genus *Lithobiocerus*, but whose females has an extremely short, particular occiput, which is not the case in *Poggiana*. With the doubt exposed above, nowadays it seems me unlike to treat *transitoria* or *dessarti* as the unknown male of *pilosella*.

Poggiana pilosella sp. nov. (Figs. 1-4)

Material. Holotype female, intact specimen, with right fore tibia and tarsi mounted separately on the same recticard (deposited in Museo Civico di Storia Naturale, Genova), from Italy, Sardinia, Archipelago of Tavolara, labelled: «Isola Molarotto, sub *Lavatera arborea* L., 27.IX.1985, R. Poggi»; «Sardegna, N.E. [Prov. SS] (=a province of Sassari)».

Description. Length 2.6 mm (head 0.5, thorax 1.0, abdomen 1.1 mm). Head, mesoscutum, basal half of scutellum, mesopleuron and the abdomen dark brown almost black. Scape, apex of frontal lobe, anterior third of pronotum, propleuron entirely, outer face of front femur and tibia, all coxae, mid and hind femora wholly, basal quarter of propodeal disc on the sides, between metanotum and propodeal spiracle, are light brown to pale castaneous. Mandible, flagellum, inner face of fore tibia and fore femur, fore tarsi, pronotal dorsum and lateral pronotal lobe, both posteriorly, propodeum almost entirely, mid and hind tibia and tarsi are straw yellow, with a weak brownish tinge. Apical teeth of mandible, a narrow transverse ring on apex of flagellar segments and the strongest spinulae on inner face of fore tarsi are red, almost pale purplish on the flagellum. Entire body and appendages uniformly clothed with short, moderately dense, decumbent pale pubescence; sparsely interspersed with semierect, stronger setulae; on the scape and frontal lobe the large hairs are as long as width of pedicel, toward the vertex becoming shorter and conspicuously much shorter on the thoracic dorsum. Eyes densely pubescent throughout.

Head 1.1 times as long as wide; with slightly converging occiput and malar space (Fig. 1). Eye, in lateral view of head, 2.4 times as long as wide; 0.48 times as long as head (Fig. 2). Width of front, at minimum distance between eyes, 1.4 times length of eye. Malar space, considered at its minimum, between anterior eye corner and basal condyle of mandible, 0.3 times width of eye; occiput as long as width of eye. Front angle of ocellar triangle right angle; ocello-ocular line equal postocellar line; median ocellus situated at upper line of inner eye orbit (Fig. 1); lateral ocelli separated from the vertex crest by a distance a bit shorter than their own diameter. A blunt median clypeal tubercle developed and prominent just below the antennal toruli, and weakly recessing posteriad and downward, up to the lower clypeal margin (Fig. 2). Mandible (Fig. 3) almost perfectly parallel-sided; distinctly bidentate apically. Scape about twice as long as thick; all segments of flagellum gradually becoming narrower but not longer, from base to apex; penultimate segment obliquely truncate apically and the last segment distinctly much shorter than the previous one. Surface of head with delicately engraved alutaceous sculpture; the reticulate network gradually becoming deeper, a bit larger and more lustrous from the frontal lobe toward the vertex; large setigerous punctures rather shallow, almost indistinct. Genae, in lateral view of head, much wider than eye, clothed with some forward directed large setae.

Thorax thrice as long as wide at its maximum, at the posterior corner of propodeum. Pronotum 1.5 times as long as wide anteriorly, its sides distinctly, although smoothly and almost uniformly converge posteriad (with a shallow sinus in the pretegular area). Exposed dorsal part of mesoscutum twice as wide as long; scutellum as long as wide, only weakly convex. Sides of propodeum uniformly diverge toward the posterior corner of propodeal disc, then again converge up to the abdominal articulation. Thoracic dorsum sculptate like the vertex; pleural area of the thorax also with a similar sculpture but perfectly glabrous. Front femur 1.7 times as long as thick; outer surface densely micropubescent and interspersed with strong setulae. Front tibia almost semicircular in shape, 1.8 times as long as thick. Combined length of fore tarsi equal to the tibia; segments 2-4 transverse, distinctly shorter than thick. Mid and hind legs normal, inner spur of hind tibia broadly lanceolate, almost transferred in a calcar.

Abdomen twice as long as wide, surface of terga sculptate like the vertex, save first tergum with a polished and shining transverse depression just beyond the articulation.

Male and host unknown. The holotype was collected together with a good series of Embioptera and submitted for identification to Prof. R. Stefani. As the embiids were of pre-adult stages, their identity remained unassigned (Dr. Poggi, pers. comm.).

Note. The holotype specimen was also examined, according to the labels, by Dr. P. Dessart, Bruxelles and by Dr. J.M. Carpenter, Cambridge, Mass.

Cryptobethylus mancinii Masi (Figs. 10-12, 19-20)

Cryptobethylus mancinii Masi, 1933: 198, male, figs. 1a-c.

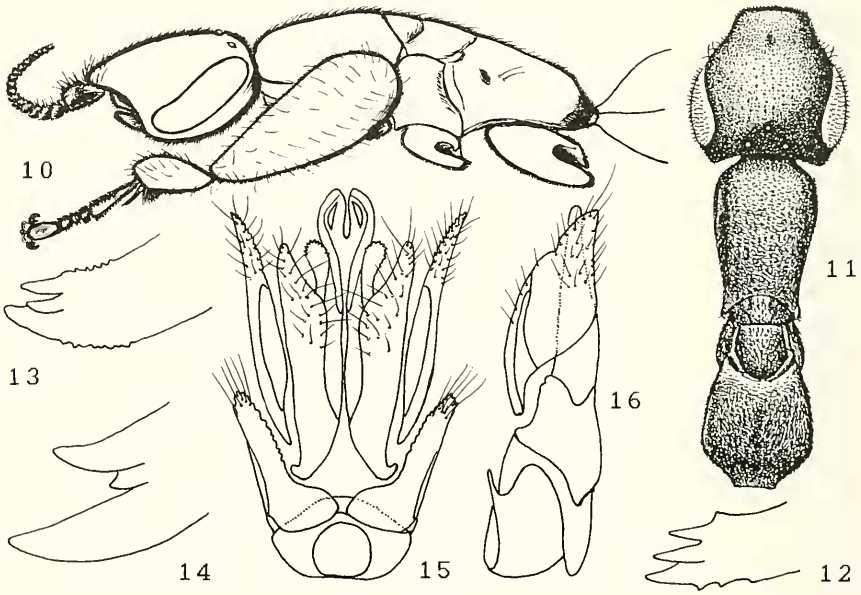
Material. Holotype male on recticard, wings and genitalia mounted separately on the same pin, labelled: «Is. Capraia (Tosc.), Paese, VI.1931, F. Capra - C. Mancini» (Museo Civico di Storia Naturale, Genova). Identified: 1 male, (Inst. Bruxelles): «France (Var), 10 km S. St. Tropez, Ramatuelle, 1.IX.1986, RMNH 86, M.J. Gijswjt» it was determined by C. v. Achterberg; 1 male, (Mus. Amsterdam): «Islas Baleares, Mallorca, Ciudad de los Layos, 17.VIII.1969, A.C. & W.N. Ellis» it was determined by J. de Rond; 1 male (coll. Arg.): «Israel, Ofaim, Oct. 1983»; 2 females (Mus. Genova): «Roma, 3.1955, Stefani»; 1 female, (Mus. Amsterdam): «Albano, Villafranca, 13.5.1945, J. Volkhemer», it was determined by J. de Rond.

The excellent figures of Masi (1933) made it easily recognizable, but I learned upon its distinctive features only after examining the holotype. Concisely, whereas in *Sclerogibba*, *Lithobiocerus* and *Prosclerogibba* males the postocellar line (the minimum distance between lateral ocelli) always greater than ocello-ocular line (Figs. 17, 21, 24, 25), in *Cryptobethylus* these two distances are equal (Fig. 19). The occiput in the former three genera shortly rounded out just behind upper top of eyes (Figs. 17, 21, 24, 25). It is long and gradually converge in *Cryptobethylus* (Fig. 19).

Additional diagnosis of male. Mandible tridentate apically, with the median tooth distinctly much shorter than the inner tooth. Median ridge of clypeus produced in a distinct blunt tubercle, situated about twice as far from the antennal toruli as from the lower clypeal margin. Front angle of ocellar triangle right angle (Fig. 19), lateral ocelli situated just beyond the line connecting upper top of eyes (the Masi's figure 1a is incorrect to this respect, placing the ocelli a little before than they actually are, but his figure 1c is correct). Pronotum rather long, with a distinct dorsal, horizontal surface, about as long as width of ocellar triangle. Parapsidal furrows wide and nearly as deeply impressed as the notaulices (remarkably narrow and shallow in all other

specimens examined). Scutellar groove straight, pit-like only on its extreme sides (of uniform depth throughout in all continental specimens). Propodeal disc with rather strong and coarse rugulae at the base and along its median furrow (with extremely delicate and regularly reticulate network in all identified specimens, although not so dense and fine as it is in *Sclerogibba crassifemorata*).

Description of the hitherto unknown female. Length 3.3-3.8 mm. Entirely black, with dark brown tinge on articulations; frontal lobe, mandible, antenna, inner face of front tibia, tarsi and apical abdominal segment light brown. Body and appendages densely clothed with rather short, decumbent, sericeous pale pubescence. Isolated stronger setulae occur only on scape, fronto-vertex, genae, thoracic



Figs. 10-16. 10-12: *Cryptobethylus mancinii* Masi, female; 10 = head and thorax lateral aspect, 11 = head and thorax dorsal aspect (figured by Jeroen de Rond). 12 = mandible. 13-16: *Sclerogibba crassifemorata* Rig. & Stef.-Per.; 13 = female mandible, 14 = male mandible, 15 = male genitalia ventral aspect, 16 = the same lateral aspect.

dorsum, abdomen, and outer face of fore femur; but they are more scattered and less numerous than the short ones.

Head (Fig. 11) exactly as wide as long medially (exclusive to the lateral occipital corners); occiput definitively converge behind eyes; vertex deeply emarginate. Eye, in lateral view of head, 2.5 times as long as wide; occiput half as long as width of eye. Width of front 1.16 times length of eye. Clypeus as described for the male. Mandible parallel-sided, apically tridentate (Fig. 12), with the median tooth longer than the inner tooth. Antennae 26-segmented, gradually tapering toward apex. Front angle of ocellar triangle right angle (in 2 specimens from the Italian mainland; only about 80° in a specimen from the Iberian Peninsula). OOL=POL, lateral ocellus separated from the vertex crest by its own diameter.

Thorax (Fig. 11) thrice as long as wide; pronotal disc about 1.7 times longer than wide, having loose contours both anteriorly and laterally, with the pleural area obliquely declivous and not perpendicular to the dorsal disc (as it occur in *Poggiana*). Mesoscutum 1.8 times wider than long; notaulices shallow but distinct, parallel. Scutellum as long as wide. Propodeum exactly as long medially as its maximum width. Front femur 1.7 times as long as thick (Fig. 10). The general shape of legs and abdomen otherwise as described for *Poggiana*.

Remarks. The hitherto unknown female of this species was first discovered by Mr. Jeroen de Rond, who kindly informed me in a letter, sending me a sketch of the head and thorax, reproduced here on Fig. 11. Later I studied the specimen illustrated by him, from Albano, Spain, and I rather concur with his conclusions. I also studied two females from the collection of the Genova Museum. Owing to the wide distribution of males of this species, as well as the general similarity concerning development of the occiput in both sexes, and their overall disposal of ocellar triangle, there is no doubt in my mind that the sexes are now correctly associated.

Sclerogibba dissimilis Stefani

Sclerogibba dissimilis Stefani, 1956: 131, male and female, figs. 1-6.

Material. Holotype male on recticard, right wings mounted on microslide on the same pin, labelled: «Sardegna, Accas (Siliqua), Aprile 1954, I. Stefani». Paratypes, 2 females, 1 male: female, topotypic; 1 male «Sardegna, Pimentel, 4.(19)56, Stefani»; 1 female «Sardegna, Gonnesa, 7.4.1953, Stefani, ex *Embia tyrrhenica* Stef.»; another

pair of paratypes (Stefani, 1956) was not available. Type material deposited in the collection of Museo Civico di Storia Naturale, Genova.

Holotype and the paratype male examined are perfectly identical in all minute details. They are also conspecific with *Sclerogibba crassifemorata* putative male I have figured (ARGAMAN, 1988, figs. 4, 19, 14), except for the antennae, legs, wing venation and the chetotaxy of the wing membrane are much darker, brownish to almost black. These constituents are yellowish brown to pale castaneous in *crassifemorata*. Paratype females differ both between them as well as from *crassifemorata* lectotype, in some minute details, not considered here to be a specific value, as follows: the female from Accas have the head very large, 1.5 times wider than propodeum; posterior half of scutellar disc hordered laterally by a thin, superficial and almost indistinct longitudinal ridge. The female from Gonnesa have the head very narrow, only 1.3 times wider than propodeum; anterior half of scutellar disc bordered laterally by a pair of rather sharp, diverging, relatively thick and conspicuous carinae. The female *crassifemorata* have the head 1.25 times wider than propodeum, scutellar disc bordered on anterior half, as in Gonnesa female, save that the ridge is almost indistinctly weak. I can find no reliable features to separate *dissimilis* in an independent species, and still to consider it to be a junior synonym of *crassifemorata*.

Sclerogibba crassifemorata Riggio & De Stefani-Perez
(Figs. 13-16, 17-18)

Sclerogibba crassifemorata Riggio & De Stefani-Perez, 1888: 146, female, figs. 1-5.

In a study concerning life and scientific activities of TEODOSIO DE STEFANI-PEREZ, besides, CALECA and MINEO (1985) revoke the discovery of this new genus and species, and consequently of a new family of aculeate wasps, Sclerogibbidae, as one of the most outstanding results of this indefatigable researcher of the nature. They mention the fact that the type of this species can not be found in the collection of the University Palermo. In addition, Dr. Caleca (pers. comm.) has kindly informed me that the specimen at my hand is presumably the unique existent type, once sent to the abbe J.J. Kieffer for examination and apparently never returned by him.

APPENDIX

Lithobiocerus vagabundus Bridwell (Figs. 5-9, 21-23)

Lithobiocerus vagabundus Bridwell, 1939: 36, female.

I have studied the male genitalia of this widely distributed species (Figs. 5-8). Particularities of this character at level of the genus and species is less convincing than desired, and may become an unlimited source of erroneous interpretations. This because their constituents, especially the aedeagus, are much less sclerotized and hardened than they are in the great majority of Aculeata. Even the most delicate treatment of it may cause slight deformations, up to strong and undesired distortions, showing then apparent specific distinctness not supported by additional morphological features. Comparatively, however, the genitalia of *Lithobiocerus* (Fig. 5) appears to be more generalized than the genitalia of *Sclerogibba* (Fig. 15), *Cryptobethylus* or *Prosclerogibba* males.

Prosclerogibba transitoria Dessart, comb. n. (Fig. 24)

Sclerogibba transitoria Dessart, 1982: 47, male, figs. 1-4; Dessart, 1985: 95, male, figs. 1-4; Argaman, 1988: 184, male, syn.

Material. Holotype male on tag, partially mounted on slides, labelled: «Somalie, Mogadiscio, Afgoi Valley, 16/18-IV, 1978. Rec. N. Bin, piege Malaise». Holotype deposited in the collection of Institut Royal des Sciences Naturelles de Belgique, Bruxelles.

The holotype is very deficitary and incomplete: now without antennae, wings from the right side, left mid leg last tarsal segment and the abdomen. Part of these pieces were mounted on slides. On the whole, *transitoria* have the median tooth of mandible longer than the inner tooth, lateral ocelli situated exactly under the line connecting upper top of eyes, occiput short, forming a continuous arch of curve with the vertex. All these characters are exactly as they occur in *Lithobiocerus*. But in *Lithobiocerus* lateral ocelli are large, whilst in *transitoria* relatively small. Hence I do not assume that there can exists a morphologically expressed bimodal variation due to nictemeral habits in the Aculeata, I regard *transitoria* as a distinct species. In addition, the acute front angle of ocellar triangle is an uncommon feature.

Prosclerogibba dessarti spec. n. (Figs. 25-26)

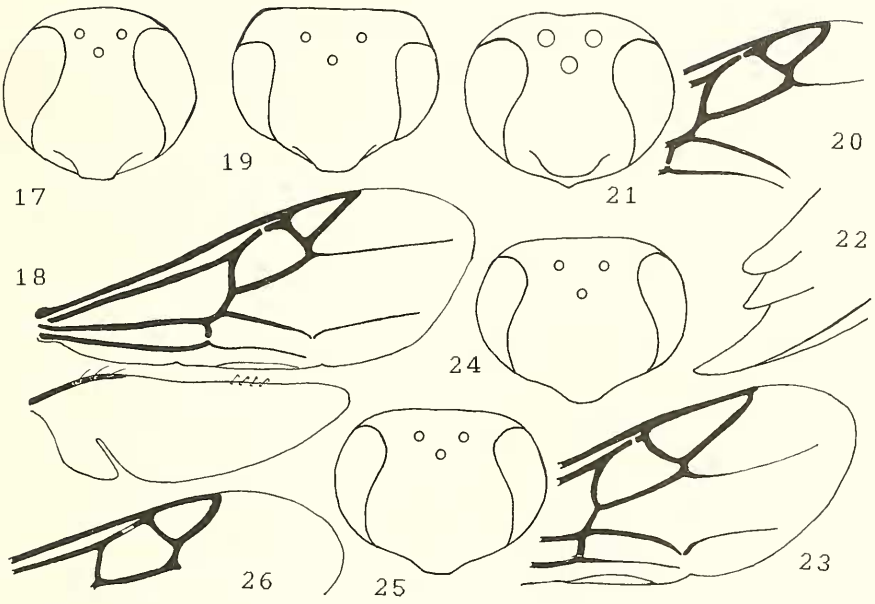
Sclerogibba transitoria Dessart, 1985: 95 nec 1982: 47, male.

Material. Holotype male, incomplete, on tag, and 8 paratype males, all damaged specimens, labelled: «Togo: Sokode, XII.1982/PM (=piege Malaise), A. Pauly rec.». Holotype and 6 paratypes deposited in the collection of Institut Royal des Sciences Naturelles de Belgique, Bruxelles; 1 paratype in the collection of Museo Civico di Storia Naturale, Genova; 1 paratype in Coll. Argaman.

Description. Length 3.2 mm, length of fore wing 2.0 mm. Body and appendages black. The following parts are yellowish brown: apical rim of frontal lobe, mandible, palpi, radicle, scape, pedicel, tegula, apex of coxae narrowly, knees, apex of tibiae, tarsi, costal, subcostal and radial veins of fore wing, and apical half of hypopygium. Wings hyaline, somewhat milky; median, basal and transverse median veins vitreous. Wings membrane clothed with rather short darkish pubescence. Body and appendages uniformly clothed with short pale pubescence, usually shorter than diameter of an ocellus, except outer eye orbit with some strong and long setae.

Head (Fig.) 1.12 times as wide as long. Eye short and densely pubescent; 2.2 times as long as wide. Width of front, at minimum distance between eyes, 1.17 times length of eye. Surface of head delicately but densely alutaceous, with extremely small, randomly scattered setigerous punctures. Mandible tridentate apically, with the median tooth longer than inner tooth. Front angle of ocellar triangle greater than right angle (about 110°). Postocellar line 1.6 times greater than ocello-ocular line. Temples rounded at short distance beyond eyes. Antennae with 27-31 segments.

Thorax 1.8 times as long as wide. Pronotal disc with short horizontal surface; a transverse humeral impression complete basally, but neither in form of a furrow nor foveolate. Mesoscutum with deeply impressed notaulices complete throughout, diverging and tapering anteriorly. Sides of scutellum converging posteriad, surface flat. Metanotum with a narrow, transverse median fovea. Disc of propodeum with a conspicuous transverse furrow basally, and with sharp longitudinal keel complete from that furrow up to the abdominal articulation. Thoracic dorsum entirely covered with moderately dense alutaceous sculpture, and with interspersed small setigerous punctures, except on propodeal disc with some slightly defined oblique costulae. Mesopleuron shining, with very scattered setigerous punctures, and with a shallow, sparse network of alutaceous sculpture. Legs normal; fore



Figs. 17-26. 17-18: *Sclerogibba crassifemorata* Rig. & Stef.-Per., male; 17 = head, 18 = wings, 19-20: *Criptobethylus mancinii* Masi, holotype male; 19 = head, 20 = marginal cell area of fore wing. 21-23: *Lithobiocerus vagabundus* Bridw., male; 21 = head, 22 = apex of mandible, 23 = marginal cell area of fore wing. 24: *Prosclerogibba transitoria* Dess., holotype male, head. 25-26: *P. dessarti* sp. nov., paratype male; 25 = head, 26 = marginal cell area of fore wing.

femur twice as long as wide; inner spur of middle tibia as long as the outer spur. Fore wing with marginal cell triangular in shape, first submarginal cell trapezoidal. Wing membrane completely devoid of any trace of spurious veins.

Abdomen twice as long as wide, slightly compressed dorso-ventrally. Segments shining, sculpture like to that of mesopleuron. Pubescence uniformly long and dispersed throughout, save hypopygium more densely covered with stronger and longer, subdecumbent yellowish setae.

Female and biology unknown.

Variation. Size vary from 2.16 to 3.3 mm. In the holotype and two paratypes lateral ocelli are situated distinctly below the line connecting upper tops of eyes. In the very small sized specimens,

however, the lateral ocelli are placed above that line, touching it at their lower margin. In one paratype line connecting upper tops of eyes exactly transect the center of lateral ocelli. Owing to the circumstance that all these specimens were collected at same time and place, all of them possesses front angle of ocellar triangle obtuse, wings hyaline to milky, I regard them as one species.

Etymology. This new species is dedicated to Dr. Paul Dessart, Institut Royal des Sciences Naturelles de Belgique, bruxelles, the eminent specialist of microhymenoptera, who kindly enabled me to study this valuable material.

Remarks. *Prosclerogibba dessarti* easily separated from other species due to the hyaline wings, with no trace (Fig. 26) of spurious veins outward of the first submarginal cell (substituted by a spectral fold, detectable only in an incident light), as they occur in *Sclerogibba crassifemorata*. In *dessarti* the upper sector of basal vein longer than the lower sector, while in *Prosclerogibba transitoria* the lower is the longer. The most distinctive feature remains, however, position of the ocelli. This character must be appreciated always perpendicular to the ocellar triangle, and not to the front, which may be misleading. Front angle of ocellar triangle is a right angle in *crassifemorata*, acute in *transitoria*, and it is obtuse in *dessarti*.

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ABSTRACT

The present study contains a revised key of some genera, and the description of a remarkable new genus, *Poggiana* discovered by zoological expeditions of the C.N.R. oceanographic ship «MINERVA» in the circumsardinian islands, *Poggiana pilosella* inhabit the same relatively small geographic area, viz. Italy and its islands, where other two genera, *Sclerogibba* and *Cryptobethylus*, and the family Sclerogibbidae have become known for science. Besides, the hitherto unknown female of *Cryptobethylus mancinii* are described. Another species, *S. dissimilis* is still to be maintained as a synonym of *Sclerogibba crassifemorata*. The appendix contains the description of a new species, *Prosclerogibba dessarti* from Togo; the species *Sclerogibba transitoria* considered valid, transferred in the genus *Prosclerogibba*, restored from synonymy.

RIASSUNTO

L'Autore fornisce una tabella aggiornata di determinazione di alcuni generi di Sclerogibbidae, descrivendo un interessante nuovo genere, *Poggiana*, raccolto nel corso delle spedizioni zoologiche effettuate a mezzo della nave oceanografica «Minerva» del C.N.R. nelle isole circumsarde.

Poggiana pilosella n. gen., n. sp. proviene dunque dalla stessa area geografica in cui sono stati rinvenuti i primi rappresentanti dei generi *Sclerogibba* e *Cryptobethylus* e conseguentemente della stessa famiglia Sclerogibbidae.

Con l'occasione viene descritta anche la ♀ di *Cryptobethylus mancinii* Masi e viene confermata la sinonimia *Sclerogibba crassifemorata* Riggio De Stefani-Perez, 1888 = *S. dissimilis* Stefani, 1956.

In appendice è descritta una nuova specie del Togo (*Prosclerogibba dessarti* n. sp.) mentre *Sclerogibba transitoria* Dessart è ritenuta specie valida ma trasferita al gen. *Prosclerogibba* Kieffer, a sua volta considerato genere valido e distinto da *Sclerogibba*.